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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,238	02/18/2004	Hiroyuki YAMAUCHI	28569.5817	2237
20322	7590	06/30/2005	EXAMINER	
SNELL & WILMER ONE ARIZONA CENTER 400 EAST VAN BUREN PHOENIX, AZ 850040001			CHO, JAMES HYONCHOL	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

✓ A JL

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,238	<b>Applicant(s)</b> YAMAUCHI ET AL	
	<b>Examiner</b> James Cho	<b>Art Unit</b> 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-23 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-14, 16-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 15 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/553,308.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/04, 4/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 4-5, 8-14, 16-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Beers et al. (US PAT No. 5,568,064).

Regarding claims 1, 11 and 16, Fig. 2 of Beers et al. teaches a signal transmitting/receiving apparatus, comprising: a transmitting device (20 on the left) for transmitting a first data and a second data (data over 22 and 24); a receiving device (20 on the right) for receiving the first data and the second data; a data line (22 and 24) for transmitting the first data and the second data; wherein the transmitting device and the receiving device are connected to each other through the data line, the transmitting device comprising: a driver circuit (12) for outputting the first data to the data line; and a circuit (10) for outputting the second data to the data line, the receiving device comprising: a terminating resistor (14, active termination) connected to the data line; a receiver circuit (16) for detecting the first data from the data line; and a bias generating means (10) for generating a bias voltage applied to the terminating resistor; the bias generating means setting the bias voltage based on the second data from the data line (col. 5, lines 29-30).

Regarding claims 2, 12 and 17, Fig. 2 of Beers et al. teaches a signal transmitting/receiving apparatus according to claims 1, 11, and 16 wherein the bias generating means comprises a bias generating circuit (40 in Fig. 3) and a reference voltage generating circuit (38 in Fig. 3).

Regarding claims 3, 13 and 18, Fig. 2 of Beers et al. teaches a signal transmitting/receiving apparatus according to claims 1, 11, and 16, wherein the data line for transmitting the first data and the data line for transmitting the second data are different (22 and 24 are different).

Regarding claim 4, Fig. 2 of Beers et al. teaches a signal transmitting/receiving apparatus according to claim 1, wherein the data line comprises a pair of differential lines (24 has two lines differential).

Regarding claim 5, Fig. 2 of Beers et al. teaches signal transmitting/receiving apparatus according to claim 3, wherein the data line comprises a pair of differential lines (24 has two lines differential).

Regarding claims 8, 14, and 20, Fig. 2 of Beers et al. teaches signal transmitting/receiving apparatus according to claims 1, 11, and 16, further comprising a ground interconnect line for connecting a ground of the transmitting device and a ground of the receiving device (ground are connected together in Fig. 2).

Regarding claim 9, Fig. 2 of Beers et al. teaches 9 a signal transmitting/receiving apparatus according to claim 1, wherein the data line has flexibility (22 and 24 are inherently flexible over temperatures).

Regarding claim 10, Fig. 2 of Beers et al. teaches a signal transmitting/receiving apparatus according to claim 8, wherein the ground interconnect line has flexibility (22 and 24 are inherently flexible over temperatures).

***Allowable Subject Matter***

Claims 21-23 are allowable over the prior art of record.

Claims 6-7, 15 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Although Beers et al. bidirectional transmission line driver/receiver, one of ordinary skill in the art would not have been motivated to modify the teaching of Beer et al. to further includes, among other things, the specific of the termination resistor being connected to short circuit between the pair of differential lines as set forth in the claims 6-7, 15 and 19, and a plurality of terminating resistors connected to the plurality of corresponding data lines, respectively; and a plurality of receiver circuits for detecting the plurality of first data from the plurality of data lines, respectively, at least one bias generating means for generating a bias voltage to be applied to the plurality of

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terminating resistors, the at least one bias generating means setting the bias voltage based on the at least one second data from the plurality of data lines as set forth in claim 21.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okayasu (US PAT No. 6,114,898) discloses an output driver with bias generator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Cho whose telephone number is 571-272-1802.

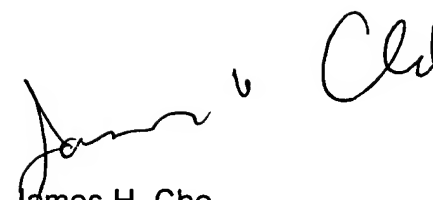
The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'James H. Cho', with a small 'v' mark to its right.

James H. Cho  
Primary Examiner  
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